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ABSTRACT

Two institutions initiated a long-term National Child Care Research Program in 1990. The program has two components: (1) examining the comprehensiveness of services offered by licensed center-based child care; and (2) documenting the development of children in licensed center-based child care. This publication reports the results of the first phase of the research program. Data were collected on 1,480 children in 122 child care centers in 15 states. Information on child, family, teacher, and program characteristics was gathered by telephone interviews. Children's mathematics, science, and reading abilities, and social skills were assessed in the classroom by developmental assessment scales. Initial assessments occurred in the fall and winter of the school year, and progress assessments the following spring. The survey results indicated that the child care programs offered an array of educational, cultural, and health-related services to children and their families; and established extensive community networks. The assessment results indicated that there were marked increases in children's abilities from the initial to the progress assessment. A series of appendixes presents the findings in tabular and graphic form. (BC)

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FINDINGS OF THE INITIAL PHASE OF THE NATIONAL CHILD CARE RESEARCH PROGRAM

Directed by Assessment Technology Inc.
John R. Bergan, Ph.D. and Jason K. Feld, Ph.D.

In cooperation with
The Foundation for Child Care Research and Education

OVERVIEW & IMPORTANCE

In recent years, there has been an emergence of widespread and growing recognition of the pressing need to improve the early education of America's young children. The nation's concern with quality early education and school readiness has been articulated by President Bush both in his Education Summit with Governors and in his State of the Union address. A major educational goal to emerge from the Education Summit and expressed by the President was that "By the year 2000, all children in America will start school ready to learn." A fundamental educational objective underlying to this goal was that steps must be taken to ensure that children be better prepared for school and that schools be better prepared to educate children, especially young children.

The nation's concern with quality early education has also been articulated by the Committee for Economic Development, a national business organization. In their 1991 report, The Unfinished Agenda: A New Vision for Child Development and Education, they call for combining a wide range of public and private resources to address all aspects of children's early development. Included in the report's recommendations is the need for every community to do a comprehensive assessment of how it addresses children's needs, particularly how it coordinates early childhood development and education. The report also recommends that all programs providing service for children from birth to age 5 should focus on the developmental and educational needs of the child.

As a result of the growing national interest and need to ensure quality early education and development for young children, the Foundation for Child Care Research and Education and Assessment Technology Incorporated (ATI) initiated the first phase of a long-term National Child Care Research Program in August 1990. The major objective of this research program is to examine issues related to the role of child care in helping to meet the nation's needs for nurturing the cognitive and social development of children, in preparing children for successful educational experiences upon entering school, and in providing children with comprehensive quality early childhood care.

Assessment Technology Incorporated is a research and service corporation. ATI specializes in assessment and policy research and service related to the development of young children. The directors and staff of ATI have over 60 years of combined experience in the design and implementation of research related to early childhood care, education, and development. The mission of the Foundation Child Care Research and Education is to support scientific, education, and charitable activities that promote the health, education, and welfare of young children and their families and that lead to the greater protection and advancement of the public good and welfare. The Foundation is committed to supporting the nation's efforts to ensure that children are provided with early learning environments that promote their cognitive, social, and physical development and that prepare them for successful life experiences. A major goal of the Foundation related to the current child care needs of the nation is to provide the public with empirically based information on the effectiveness of child care in promoting children's early development as we move into the 21st century. A second goal of the Foundation is to facilitate the construction of a national database comprised of information on child care policy variables. This information would provide state and national child care associations, as well as regulators, legislators, and child care advocates with an empirical basis for formulating objective and equitable child care policy. A third goal of the Foundation is to assist the child care community in the development and dissemination of educational innovations that enhance our nation's effectiveness in nurturing children's development.

FOCUS OF THE NATIONAL CHILD CARE RESEARCH PROGRAM

The National Child Care Research Program consists of two components fundamentally related to examining and enhancing the effectiveness of child care in helping to meet the nation's needs for quality early education and child care:

Component 1: Examining the Comprehensiveness of Services Offered by Licensed Center-Based Child Care

The research program assumes that many of the developmental benefits derived by children participating in child care programs are strongly influenced by the comprehensiveness of services available to children and their families and the experience of program staff in delivering those services. Consequently, the first component of the research program is to document the types of services provided to children and families through child care programs and the level of experience of staff in delivering those services.

National Importance of Component 1

All children have the right to quality early childhood educational opportunities and standards and practices should be established that promote and help to ensure quality comprehensive developmental services for all children. In particular, regulatory and policy recommendations which affect the child care community need to based on empirical data. Decisions lacking empirical support may have negative consequences for children, their families, and the child care programs who are committed to providing them with quality services. Research in the center-based child care community is needed to identify those services that have a positive effect on children's growth and development. Such research is needed to make informed policy decisions regarding what must be done to ensure high quality early educational environments for young children.

Component 2: Documenting the Development of Children in Licensed Center-Based Child Care

A large and increasing number of families utilize licensed center-based child care. Child care plays a major role in promoting the development of young children. The research program assumes that as we move into the 21st century, the influence of child care on the early development of the nation's children will increase. Consequently, the second component of the research program is to document children's early development and the extent to which children are prepared for successful educational experiences upon entering school.

National Importance of Component 2

Most of the research that has been conducted on children's early development has occurred in federally funded or University based carefully supervised experimental programs. However, the vast majority of studies do not focus on developmental outcomes for children participating in licensed center-based child care programs. Licensed center-based child care programs are an essential part of the community. Since 1969, there has been a steady increase in the number of preschool-age children participating in these programs. In fact, the vast majority of families utilizing child care enroll their children in licensed center-based child care programs. Given the central role that licensed center-based child care plays in the early lives of children, it is important to document the extent to which children participating in child care programs are developing the knowledge and skills and social competencies necessary for later success in school.

PHASE 1 OF THE RESEARCH PROGRAM

Sample

Centers. Data for the first phase of the research program were gathered in 122 child care centers containing 943 classrooms in 15 states across the nation. The following states had programs included in the analysis: Alabama, Arizona, California, Colorado, Florida, Georgia, Idaho, Illinois, Massachusetts, Nevada, New York, New Jersey, South Carolina, Texas, and Virginia. Centers from these states represented both urban and rural areas. The cost for a child to receive full-day care in a center was approximately $76.00. The teachers working in these centers had an average of 3.48 years of experience in their present capacities a teachers and 44% of them had an additional 4.04 years of experience working in other centers prior to their current employment.

Children. Data were collected on 1480 children. On the average, these children spent approximately 9 hours a day, 5 days a week, and 49 weeks per year in the child care environment. Fifty-three percent of the children were male and 47% were female. The mean age of the children at the time of the initial assessment was approximately four years, seven months. The sample was composed of the following ethnic groups: African American (6%); American Indian (2%); Asian American (3%); Caucasian (81%); Hispanic (6%); and other ethnicities (2%). Families whose children were receiving child care represented the full range of socioeconomic levels. Socioeconomic level was measured by the occupational status of the principal wage earner in the family. For descriptive purposes, the sample was divided into three occupational groups. Group 1 included occupations such as physician, pharmacist, and lawyer. Group 2 included sales and office managers, secretaries, and medical technicians. Group 3 included laborers, bus drivers, and delivery persons. Fifteen percent of the sample fell into group 1, forty-one percent were in group 2, and forty-four percent were in group 3.

Instruments

Two kinds of instruments were used in the research. The first was comprised of survey instruments designed to gather information on child, family, teacher, and program characteristics. The family characteristics survey provided information on the age, sex, and ethnicity of the child and the occupational status of the principal wage earner in the family. The teacher characteristics survey provided information on the teaching experience of child care teachers. The program services survey provided information on the types of services available in child care centers. This instrument was used to evaluate the comprehensiveness of services available in the child care programs participating in the research program.

The second type of instrument used in the research involved the assessment of children's development during their participation in the child care program. Children's abilities were assessed with the **MAPS** developmental assessment scales. The **MAPS** Scales are designed to provide assessment information in the service of teaching and learning. **MAPS** instruments assess development by indicating children's progress along empirically validated developmental paths. **MAPS** instruments indicate what children have already accomplished, what they are ready to learn now, and what they will be ready to learn later. Because they indicate not only children's past accomplishments, but also what children are ready to learn, they are well suited to the task of determining the extent to which children are prepared for successful experiences at the time they enter school. **MAPS** instruments used in the first phase of the research program assessed children's development and readiness to learn in four areas: Math, Nature & Science, Early Reading, and Social Development.

Procedures

Survey information was gathered by telephone interviews conducted by ATI staff with program directors, education coordinators, and teachers in child care programs. Information on family characteristics was provided by the participating programs during these interviews. Interviewing was conducted continuously from the winter of 1991 through the summer.

Child assessment was carried out in the child-care center environment by classroom teachers trained in the administration of the assessment instruments. Onsite training was supplemented by teleconferencing with local program staff designated to carry out the assessment. In addition, each staff member responsible for assessment was provided with an assessment guide detailing assessment procedures.

Initial assessments began in the fall of 1990 and ended in the winter. Progress assessment occurred in the spring. On the average, the interval between the initial and progress assessment was approximately five months.

PHASE I FINDINGS

Program Services Findings

The Comprehensive Services table describes the types of services available in the child care programs participating in the initial phase of the research. We were interested in determining the extent to which child care services were restricted to meeting basic health and safety needs as opposed to offering a broad range of experiences aimed at promoting the development of children and families. The data in the Comprehensive Services table indicate that the child care programs participating in the research offer a broad range of educational, social, cultural, and health-related services to children and families. For example, over 96 percent of the programs report that they provide educational activity centers in reading, math, and science. Over 90 percent of the programs report that they provide music and arts activity centers. Forty-four percent of the centers provide onsite professional instruction in music and dance. One-hundred percent of the programs indicate that they provide activity centers designed to afford children role playing experiences aimed at promoting social development. Sixty-three percent of the programs provided vision and hearing screening, and fifty-four percent provide speech and language screening. However, less than 10 percent of the programs provide psychological assessment, family counseling, and medical and dental services. Further study is needed to determine the extent to which families are obtaining these services from other resources.

The data indicate that child care programs in the study have established working networks with community agencies, schools, universities, and professional organizations to increase the effectiveness of their staff in providing quality care to children and families and to promote parent involvement in children's early education. For example, 98 percent of the programs report that they provide educational workshops for teachers. Ninety-seven percent indicate that they conduct parent-teacher conferences throughout the year, and fifty-one percent indicate that they provide educational workshops for parents.

Overall, the results indicate that child care programs offer an impressive array of educational, cultural, and health-related services to children and their families. Moreover, they have established extensive community networks to increase the effectiveness of their teachers and to promote the involvement of parents in their children's development.

Findings on Children's Developmental Abilities and Readiness to Learn

The Program Progress Report figures reveal the developmental progress realized by children during the program year. A major finding of importance is that large numbers of children had achieved advanced levels of development by the time of the progress assessment. Eighty-nine percent of the children were at advanced levels in math. Ninety-one percent were at advanced levels in nature and science, eighty percent in reading, and ninety-one percent were at advanced levels in social development. By contrast, at the time of the progress assessment, only a little more than one percent of the children were at a beginning level in these four areas of development.

A second important finding is that there were marked changes in children's abilities from the time of the initial assessment to the time of the progress assessment. Moreover, the relationship between children's abilities and age was quite small. Thus, the changes that occurred cannot be accounted for to any significant extent in terms of maturation.

To convey the implications of these findings for school readiness, it is useful to describe the capabilities of children scoring at intermediate and advanced levels of development. The kinds of skills reflected in the intermediate and advanced levels achieved by the majority of children are of recognized importance to success in school.

MATH:

In the area of math, children who have achieved intermediate or advanced levels of development at the end of the year know or are ready to learn basic counting, simple addition and subtraction skills, numeral recognition skills, ordination skills, and set comparison skills. Moreover, they have a basic understanding of time and length concepts, and can identify simple geometric shapes.

NATURE & SCIENCE:

In nature and science, children at intermediate and advanced levels have acquired a basic understanding of the physical world and the world of living things. They know or are ready to learn the kinds of things that affect the movement of physical objects, factors affecting weather, what makes light and shadows, and what stars and planets are and how they move. They can identify the environments where animals live, how animals affect their environments, and how the environment can affect animal life. They have a basic understanding of animal life cycles. Finally, they know or are ready to learn the functions of basic plant parts and what makes plants grow.

EARLY READING:

In the area of reading, children at intermediate or advanced levels have a basic understanding of print concepts such distinguishing print from scribble, and reading from top to bottom and left to right. They have acquired a basic knowledge of story structure including how stories are put together, the causes of events in a story, the feelings of characters, and what the predicted outcome of a story will be. They are also able to identify letters and letter sounds, and can read simple words in context.

SOCIAL DEVELOPMENT:

In social development, children at intermediate or advanced levels know or are ready to learn how to identify how a person is feeling based on appearance and behavior, how feelings can affect behaviors. They also know or are ready to learn to identify community helpers such as policemen, teachers, and doctors. Finally, they have a basic understanding of helping, sharing, cooperation, fairness, and friendship.

APPENDIX

Survey of Selected Comprehensive Services

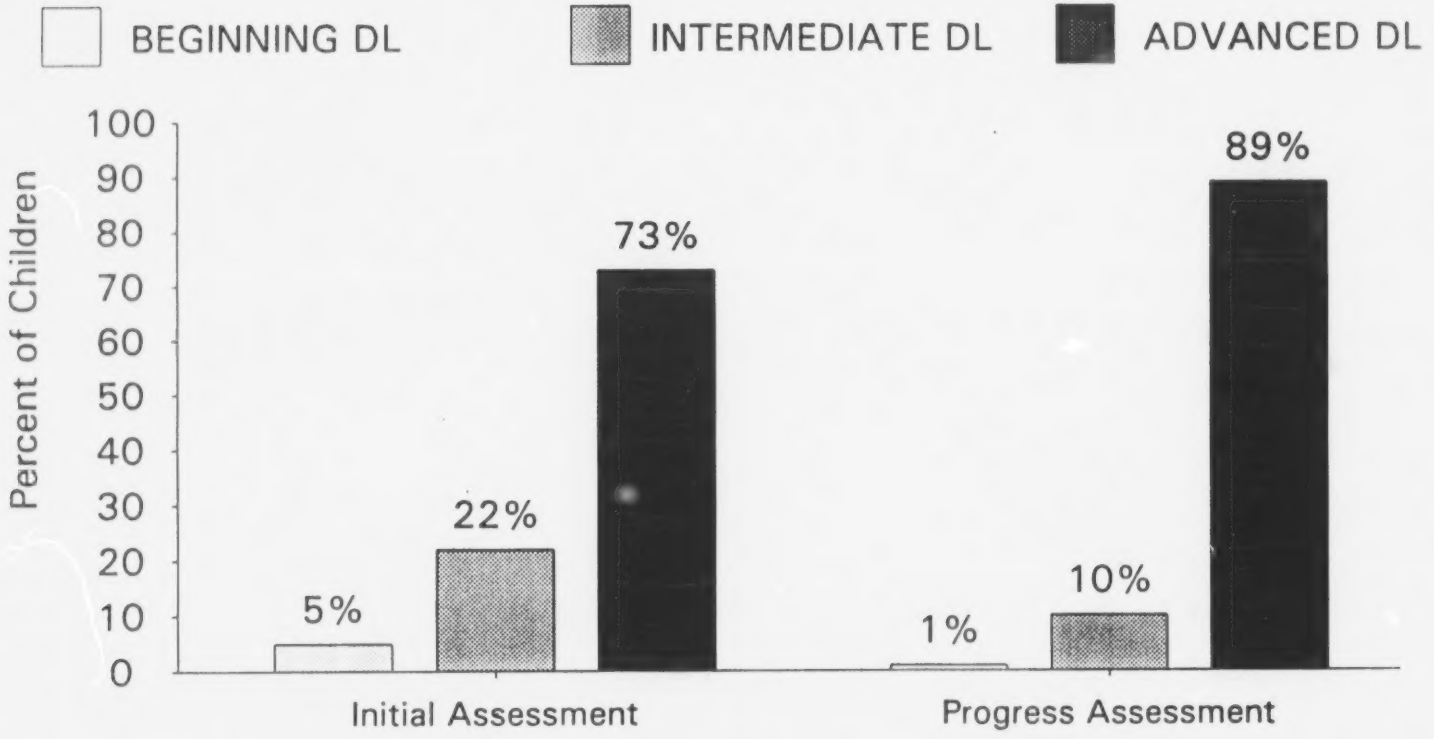
Math Progress Report
Nature & Science Progress Report
Reading Progress Report
Social Development Progress Report

Comprehensive Services Provided by Early Childhood Programs

	YES	NO	# Programs
Educational Activity Centers			
Reading Area	97% (n=116)	3% (n=3)	119
Science Area	90% (n=106)	10% (n=12)	118
Audio/Video Area	87% (n=103)	13% (n=16)	119
Computer Area	58% (n=69)	42% (n=49)	118
Music Area	97% (n=115)	3% (n=4)	119
Arts/Crafts Area	99% (n=118)	1% (n=1)	119
Social Skills Activity Area	100% (n=119)	0% (n=0)	119
Math Area	99% (n=118)	1% (n=1)	119
Indoor Free Play Area	100% (n=119)	0% (n=0)	119
Outside Free Play Area	100% (n=119)	0% (n=0)	119
Fine Arts, Culture, and Physical Development			
Dance Lessons	54% (n=64)	46% (n=55)	119
Music Lessons	34% (n=41)	66% (n=78)	119
Dance/Music recitals	42% (n=50)	58% (n=69)	119
Drama Lessons and Plays	62% (n=74)	38% (n=45)	119
Second Language Lessons	37% (n=44)	63% (n=75)	119
Sports Lessons	57% (n=68)	43% (n=51)	119
Medical and Psychological Services			
Vision/Hearing Screening	63% (n=66)	37% (n=38)	104
Speech/Language Screening	54% (n=56)	46% (n=48)	104
Diagnostic Assessment	9% (n=10)	91% (n=95)	105
Family Counseling	7% (n=7)	93% (n=97)	104
Medical/Dental Services	5% (n=5)	95% (n=100)	105
Family, Community, and Professional Networking			
Parent/Teacher Conferences	97% (n=116)	3% (n=3)	119
Educational Workshops for Teachers	98% (n=117)	2% (n=2)	119
Educational Workshops for Parents	51% (n=61)	49% (n=58)	119
Alliance with University	60% (n=72)	40% (n=47)	119
Alliance with Elementary Schools	63% (n=74)	37% (n=44)	118
Alliance with Professional Organizations	100% (n=119)	0% (n=0)	119

MAPS CHILD PROGRESS REPORT FOR :

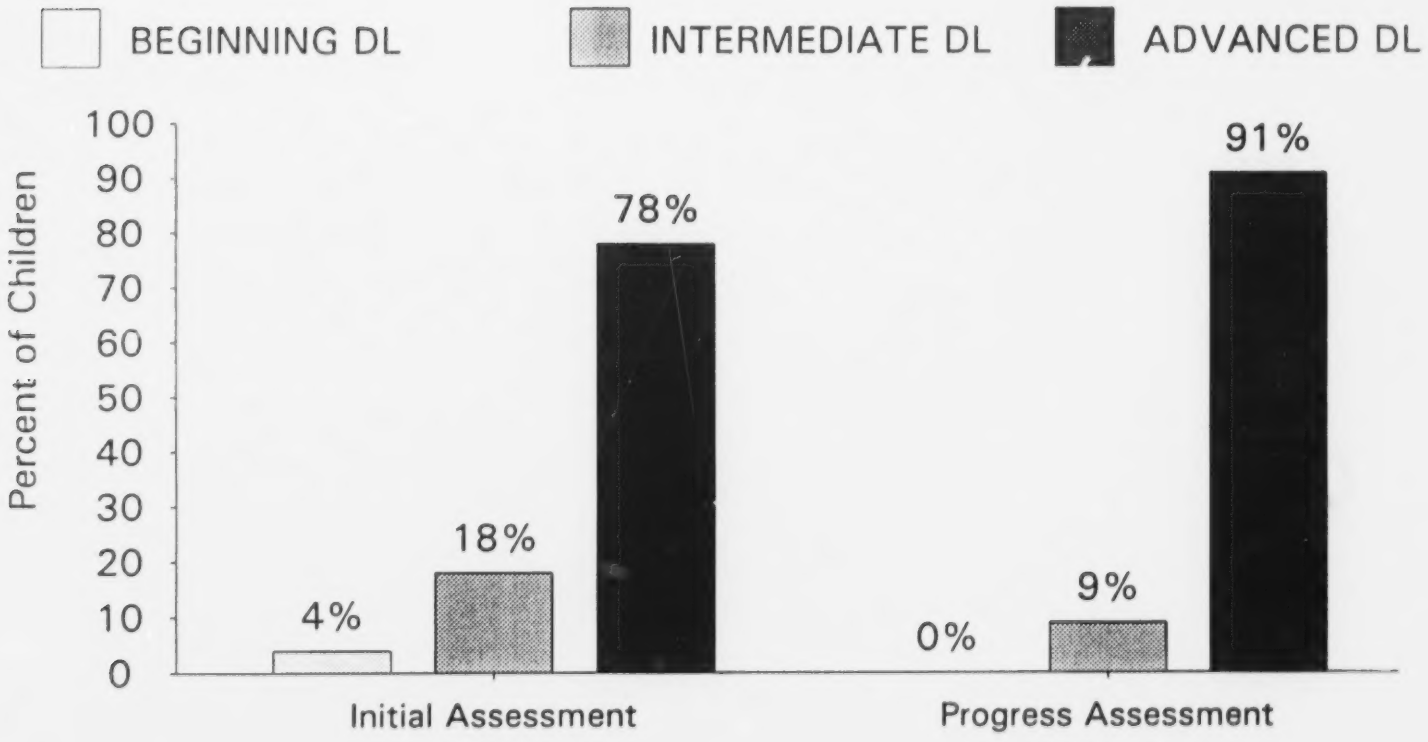
MATHEMATICS



NOTE: DL = DEVELOPMENTAL LEVEL

MAPS CHILD PROGRESS REPORT FOR :

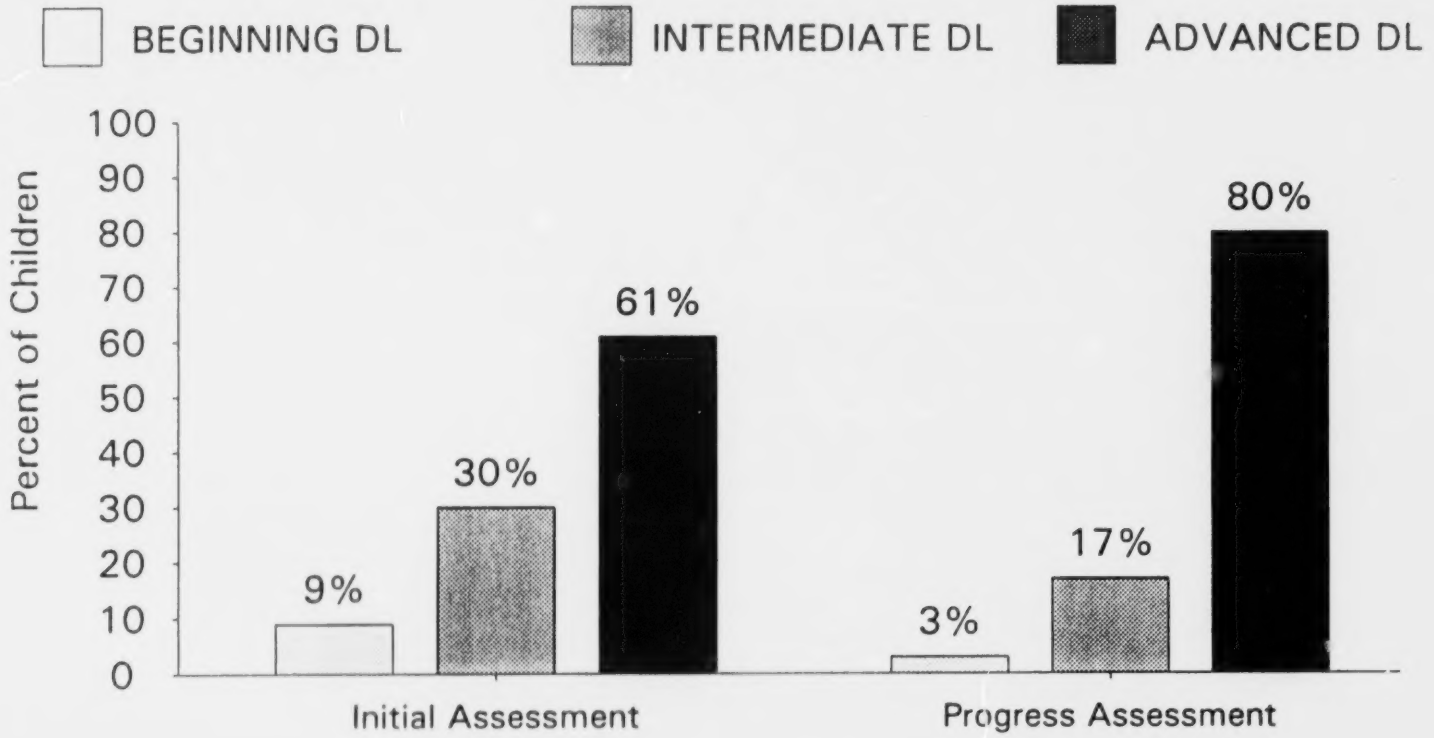
NATURE & SCIENCE



NOTE: DL = DEVELOPMENTAL LEVEL

MAPS CHILD PROGRESS REPORT FOR :

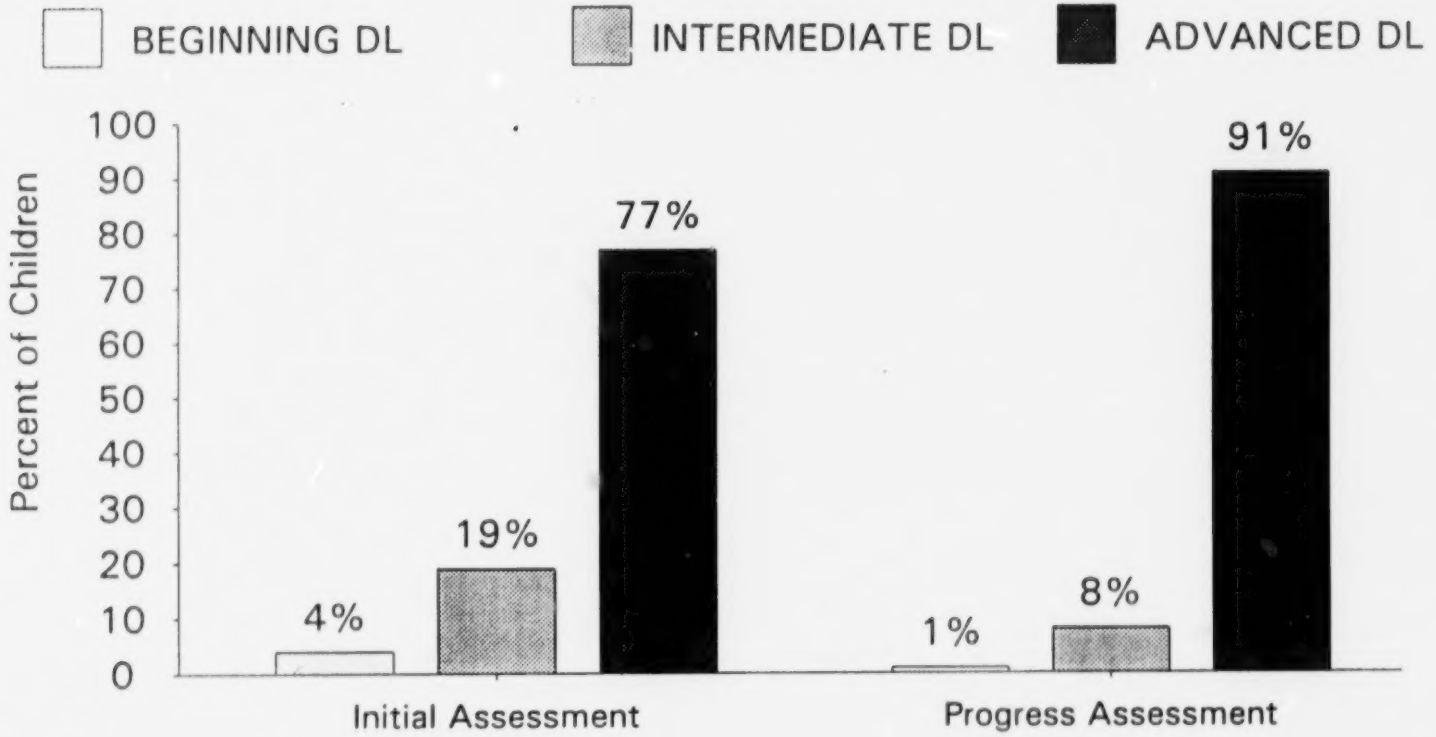
READING



NOTE: DL = DEVELOPMENTAL LEVEL

MAPS CHILD PROGRESS REPORT FOR :

SOCIAL DEVELOPMENT



NOTE: DL = DEVELOPMENTAL LEVEL